

Warm-up!

1. Solve.
 $-8x - 11 = 37$
 $x = -6$

2. Simplify
 $2\sqrt{8} \cdot 4\sqrt{3}$
 $8\sqrt{24}$
 $8 \cdot 2\sqrt{6}$
 $16\sqrt{6}$

- Tissues
- Go over homework
- Quiz on Tuesday

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Division

Rationalize the denominator!

$$\frac{3}{\sqrt{2}}$$

$$\cdot \frac{\sqrt{2}}{\sqrt{2}}$$

$$\frac{3\sqrt{2}}{2}$$

Division

$$\sqrt{\frac{7}{5}}$$

$$\frac{\sqrt{7}}{\sqrt{5}} \cdot \frac{\sqrt{5}}{\sqrt{5}} = \frac{\sqrt{35}}{5}$$

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Division

$$\frac{\sqrt{18}}{\sqrt{12}} = \sqrt{\frac{18}{12}} = \sqrt{\frac{3}{2}} = \frac{\sqrt{3}}{\sqrt{2}} = \frac{\sqrt{3} \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}} = \frac{\sqrt{6}}{2}$$

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202 Algebra Review Continued

Systems of Equations

2 Methods for solving
Substitution
Elimination

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Substitution

ex 1

$$x + 4y = 26$$

$$x = 5y - 10$$

$$5y - 10 + 4y = 26$$

$$9y - 10 = 26$$

$$9y = 36$$

$$y = 4$$

$$x = 5(4) - 10$$

$$10$$

(10, 4)

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Substitution

ex 2

$$3x + y = 18$$

$$4x + 5y = 13$$

$$4x + 5(18 - 3x) = 13$$

$$4x + 90 - 15x = 13$$

$$-11x = -77$$

$$(7, -3) \quad x = 7$$

$$y = -3$$

① Solve for one variable

② Subst. into the other equation

③ Solve

④ Find the other variable

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Elimination

ex 2

$$\begin{cases} 3x + y = 18 \\ 4x + 5y = 13 \end{cases}$$

$$-15x - 5y = -90$$

$$\begin{array}{r} -15x - 5y = -90 \\ 4x + 5y = 13 \\ \hline -11x = -77 \end{array}$$

$$-11x = -77$$

$$\begin{aligned} x &= 7 \\ y &= -3 \end{aligned} \quad (7, -3)$$

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Elimination

ex 3

$$\begin{cases} 2x + 3y = 12 \\ 5x - 2y = 11 \end{cases}$$

$$2(3) + 3y = 12$$

$$\begin{aligned} 3y &= 6 \\ y &= 2 \end{aligned}$$

$$4x + 6y = 24$$

$$15x - 6y = 33$$

$$\begin{array}{r} 4x + 6y = 24 \\ 15x - 6y = 33 \\ \hline 19x = 57 \end{array}$$

$$x = 3$$

$$(3, 2)$$

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Elimination

ex 4

$$\begin{cases} -3x + 5y = 12 \\ 6x - 10y = -21 \end{cases}$$

$$6x - 10y = -21$$

$$-6x + 10y = 24$$

$$0 \neq 3 \text{ False}$$

Parallel lines \emptyset

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Elimination

ex 5

$$\begin{cases} 3x + 2y = 9 \\ 9x + 6y = 27 \end{cases}$$

$$9x + 6y = 27$$

$$-9x - 6y = -27$$

$$0 = 0$$

True

∞ # of sol'ns on
the line $9x + 6y = 27$

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Assignment

p745 9-11,13,17

p743 7-18

Quiz Tuesday

Solving

Radicals

Systems

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